

CONSERVATION CROP ROTATION

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service



CONSERVATION CROP ROTATION

This practice means growing various crops on the same piece of land in a planned sequence. This sequence may involve growing high residue producing crops such as corn or wheat in rotation with low residue producing crops such as vegetables or soybeans. The rotation may also involve growing forage crops in rotation with various field crops.

PRACTICE FUNCTIONALITY

The effects crop rotation have on the land varies with the soil type, crops produced, farming operations, and how the crop residue is managed. The most effective crops for soil improvement are fibrous rooted high residue producing crops such as grass and small grain. Perennial plants used for forage are very effective in crop rotations due to increases in organic matter and reduced soil erosion. In

addition, crop rotations help break insect, disease and weed cycles.

Rotations add diversity to farm operations and often reduce economic and environmental risks. Crop rotation is a low cost practice that often forms the basis for other conservation practices. Practices such as residue management, contouring, stripcropping, diversions, terraces and grassed waterways may not function properly without a planned crop rotation. Major benefits include:

1. Reduced runoff and erosion
2. Increased organic matter
3. Improved soil tilth
4. Reduced pests
5. Fewer chemicals needed
6. Better moisture efficiency
7. Higher yields
8. Improved aesthetics and wildlife habitat

CONSERVATION PRACTICE PHYSICAL EFFECT WORKSHEET

NOTE: recorded in microsoft word 6.0 - use tabs to change cells/fields

STATE	ANY	FIELD OFFICE	ANY	DATE	12/5/96
PRACTICE: 328 Conservation Crop Rotation			NOTES: The effects of this practice vary widely depending on crops and management		
RESOURCE: SOIL			Help Message: Click on form field for choice lists.		
RESOURCE CONCERN: EROSION			Ues Tab key to move around. "N/A" is the default entry.		
RESOURCE INDICATORS			PHYSICAL EFFECTS		
SHEET AND RILL			moderate reduction in sheet and rill erosion		
WIND			moderate reduction in wind erosion		
EPHEMERAL GULLY			slight reduction in ephemeral gully erosion		
CLASSIC GULLY			insignificant		
STREAMBANK			insignificant		
IRRIGATION INDUCED			slight reduction in irrigation induced erosion		
SOIL MASS MOVEMENT			insignificant		
ROADBANK/CONSTRUCTION			N/A		
OTHER					
RESOURCE CONCERN: SOIL CONDITION					
SOIL TILTH			significant improvement in soil tilth		
SOIL COMPACTION			significant reduction in soil compaction		
SOIL CONTAMINATION					
• SALTS			N/A		
• ORGANICS			N/A		
• FERTILIZERS			N/A		
• PESTICIDES			N/A		
• OTHER					
DEPOSITION/DAMAGE					
• ONSITE			N/A		
• OFFSITE			N/A		
DEPOSITION/SAFETY					
• ONSITE			N/A		
• OFFSITE			N/A		
OTHER					
RESOURCE: WATER					
RESOURCE CONCERN: WATER QUANTITY					
SEEPS			N/A		
RUNOFF/FLOODING			N/A		
EXCESS SUBSURFACE WATER			N/A		
INADEQUATE OUTLETS			N/A		
WATER MGT. IRRIGATION					
• SURFACE			N/A		
• SPRINKLER			N/A		
WATER MGT. NON-IRRIGATED			moderate improvement in moisture use		
RESTRICTED FLOW CAPACITY					
• ONSITE			N/A		
• OFFSITE			N/A		
RESTRICTED STORAGE			N/A		
OTHER					

RESOURCE: WATER	
RESOURCE CONCERN: WATER QUALITY	
RESOURCE	PHYSICAL EFFECTS
GROUNDWATER CONTAMINANTS	
• PESTICIDES	insignificant
• NUTRIENTS AND ORGANICS	insignificant
• SALINITY	insignificant
• HEAVY METALS	N/A
• PATHEGENS	N/A
• OTHER	
SURFACE WATER CONTAMINANTS	
• PESTICIDES	insignificant
• NUTRIENTS AND ORGANICS	insignificant
• SUSPENDED SEDIMENTS	slight reduction in SWater contam./susp. sedi.
• LOW DESOLVED OXYGEN	N/A
• SALINITY	N/A
• HEAVY METALS	N/A
• WATER TEMPERATURE	N/A
• PATHEGENS	N/A
AQUATIC HABITAT SUITABILITY	slight improvement in Aqua. Hab. Suit.
OTHER	
RESOURCE: AIR	
RESOURCE CONCERN: AIR QUALITY	
AIRBORN SEDIMENT AND SMOKE PARTICLES	
• ONSITE SAFETY	N/A
• OFFSITE SAFETY	N/A
• ONSITE STRUCT. PROBLEMS	N/A
• OFFSITE STRUCT. PROBLEMS	N/A
• ONSITE HEALTH	N/A
• OFFSITE HEALTH	N/A
AIRBORN SEDIMENT CAUSING CONVEYANCE PROBLEMS	N/A
AIRBORN CHEMICAL DRIFT	N/A
AIRBORN ODORS	N/A
FUNGI, MOLDS, AND POLLEN	N/A
OTHER	
RESOURCE CONCERN: AIR CONDITION	
AIR TEMPERATURE	N/A
AIR MOVEMENT (windbreak effect)	N/A
HUMIDITY	N/A
OTHER	

[illegible]

RESOURCE: HUMAN	
RESOURCE CONCERN: SOCIAL CONSIDERATIONS	
RESOURCE INDICATORS	PHYSICAL EFFECTS
PUBLIC HEALTH AND SAFETY	N/A
PRIVATE/PUBLIC VALUES	N/A
CLIENT CHARACTERISTICS	insignificant
RISK TOLERANCE	N/A
TENURE	N/A
OTHER	
RESOURCE CONCERN: CULTURAL CONSIDERATIONS	
ABSENCE/PRESENCE OF CULTURAL RESOURCES	N/A
SIGNIFICANCE OF CULTURAL RESOURCES	N/A
MITIGATION OF NEGITIVE CULTURAL RES. IMPACTS	N/A
OTHER	